

08/11

PRELIMINARY ISSUE

Work Order ID 61883-1



Wednesday, September 08, 2010 3:27:43 PM

Item ID:	D4175-041	Accept		Setup	Start	
Revision ID:	PRELIM				Stop	
Item Name:	Pod GPS Doubler Assembly					
Start Date:	9/8/2010	Start Qty:	3.00		Cust Item ID:	
Required Date:	9/13/2010	Req'd Qty:	3.00		Customer:	
Reference:						

Approvals:	Process Plan:		Date:	10-2-08	Tooling:		Date:		Run	Start	
	QC:		Date:		SPC (Y/N):		Date:			Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D4175	PA1

100		0.00							
	Waterjet								
FLOW CNC Waterjet	<b>Memo</b> 1-Cut as per Dwg (D4175-1F) Dwg Rev: <u>PA1</u> Prog Rev: <u>PA1</u> 2-Deburr if necessary	0.00							
									(3)
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
	QC								
Quality Control	<b>Memo</b>	0.00							

B10-9-13

B10-9-13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 61883

Wednesday, September 08, 2010 3:27:43 PM



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Item ID: D4175-041

Accept



Setup Start



Revision ID: PRELIM

Stop



Item Name: Pod GPS Doubler Assembly

Start Date: 9/8/2010 Start Qty: 3.00



Cust Item ID:

Required Date: 9/13/2010 Req'd Qty: 3.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

120



QC

Quality Control

QC8- Inspect parts - second check

Memo

0.00

0.00

= inspector to PA1  
Dry only  
8/10/09/13 (x3)

130



Small Fab

Small Fab

Memo

1- C'sink holes as per dwg

0.00

0.00

8/10/09/13 (3)

140



QC

Quality Control

QC5- Inspect part completeness to step on W/O

Memo

0.00

0.00

8/10/09/13 (x3)  
-inspector to PA1  
Dry only

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Work Order ID 61883

Wednesday, September 08, 2010 3:27:43 PM



Page 3

Item ID: D4175-041

Accept



Setup Start



Revision ID: PRELIM

Stop



Item Name: Pod GPS Doubler Assembly

Start Date: 9/8/2010 Start Qty: 3.00



Cust Item ID:

Required Date: 9/13/2010 Req'd Qty: 3.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

150

Chemical Conversion Coat per QSI005 4.1

0.00

BR 10-9-14



HandFinish

Memo

0.00

Hand Finishing

160

Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3

0.00



Powdercoat

Memo

0.00

Powder Coating

Start Time: 2:45pm  
Oven Temperature: 320°F  
Finish Time: 3:15pm

→ 10/09/15

3

170

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

- inspector to PA

Due only

8/10/09/16

POSITIVE RECALL

EFFECTIVE 10-9-14 AUTH W

RELEASED DATE 10.06.24

W

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 61883

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Item ID:	D4175-041	Accept		Setup	Start	
Revision ID:	PRELIM				Stop	
Item Name:	Pod GPS Doubler Assembly					
Start Date:	9/8/2010	Start Qty:	3.00			
Required Date:	9/13/2010	Req'd Qty:	3.00			
Reference:						
				Cust Item ID:		
				Customer:		

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180  Small Fab	Memo 1- Install nut plate as per dwg	0.00							
190  QC	QC5- Inspect part completeness to step on W/O	0.00							
Quality Control	Memo	0.00							
200  Packaging	Identify as per dwg & Stock Location:	0.00							
Packaging	Memo	0.00							

*Handwritten:* 9/5/09/16 (3)

*Handwritten:* - inspected to PA1  
Dwg only  
8/10/09/16 (15)

*Handwritten:* 10-09-23 (1)  
~~to be replaced~~

*Handwritten:* [Signature]

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



**Work Order ID 61883**

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Item ID: D4175-041

Accept



Setup Start



Revision ID: PRELIM

Stop



Item Name: Pod GPS Doubler Assembly

Start Date: 9/8/2010 Start Qty: 3.00



Cust Item ID:

Required Date: 9/13/2010 Req'd Qty: 3.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

210

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/09/29

U 100923

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Wednesday, September 08, 2010 3:27:48 PM

Page 1

Work Order ID: 61883



Parent Item: D4175-041



Parent Item Name: Pod GPS Doubler Assembly

Start Date: 9/8/2010

Required Date: 9/13/2010

Start Qty: 3.00

Required Qty: 3.00

Comments: IPP rev:A 10.09.08 new issue verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6S.063  6061-T6 .063 Sheet		Purchased	No			100	sf	104.9340	0.053	0.167368			

Location

MAT21

113608

Loc Qty

104.934

104.934

Loc Code

1810-9-13

(3)

113608

MS20426AD3-3

Purchased

No

180

Each

5,021.000

8

24



Rivet

Location

ST316

19099

7681

Loc Qty

5021

4774

247

Loc Code

24

MS21075

Purchased

No

180

Each

0.0000

4

12



Nutplate

1105978

(12)

9/30/09/16

9/30/09/16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

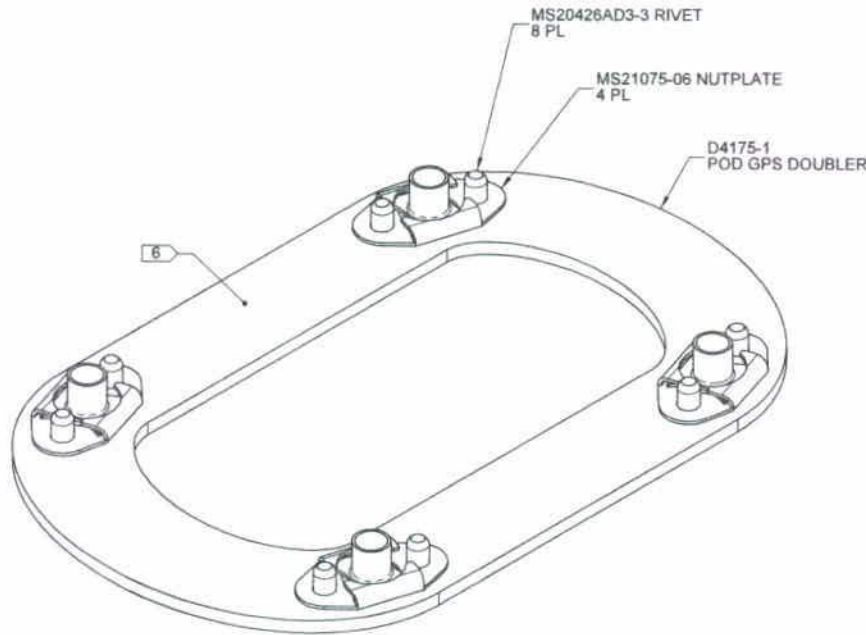
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



Route 1/Bom 1/5x F  
 10/10/09

ITEM	QTY	P/N	DESCRIPTION
	X	D4175-041	POD GPS DOUBLER ASSY
1	1	D4175-1	POD GPS DOUBLER
2	4	MS21075-06	NUT PLATE
3	8	MS20426AD3-3	RIVET



**D4175-041 POD GPS DOUBLER ASSY**

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER DART QSI 044 6.1
- 7) WEIGHT: 0.02 lbs

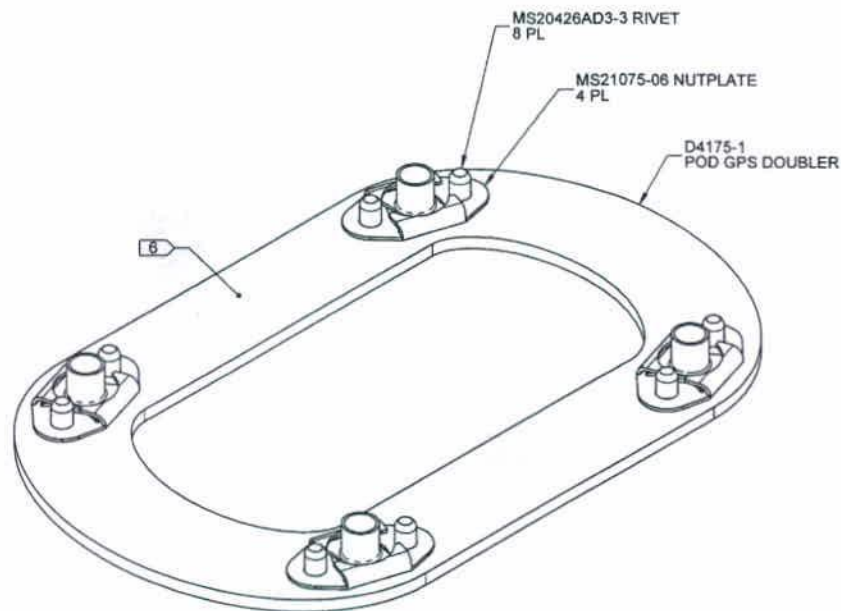
STAMPED: SUPPLY COPY  
 UNCONTROLLED COPY  
 41883  
 10-9-09

**PRELIMINARY ISSUE**  
 10.09.08

PA1	NEW ISSUE	DESCRIPTION	MB	10.09.01
REV.		BY	DATE	
DESIGN		<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA		
DRAWN				
CHECKED		DRAWING NO.	REV. PA1	
MFG. APPR.		D4175	SHEET 1 OF 2	
APPROVED		TITLE	SCALE	
DE APPR.		POD GPS DOUBLER ASSY	NTS	
DATE	10.09.01	COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRELIMINARY AND UNCONTROLLED. IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON OR ENTITY WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.		



ITEM	QTY -041	P/N	DESCRIPTION
	X	D4175-041	POD GPS DOUBLER ASSY
1	1	D4175-1	POD GPS DOUBLER
2	4	MS21075-06	NUT PLATE
3	8	MS20426AD3-3	RIVET



**D4175-041 POD GPS DOUBLER ASSY**

61883

**RELEASED**  
2010-09-23

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER DART QSI 044 6.1
- 7) WEIGHT: 0.02 lbs

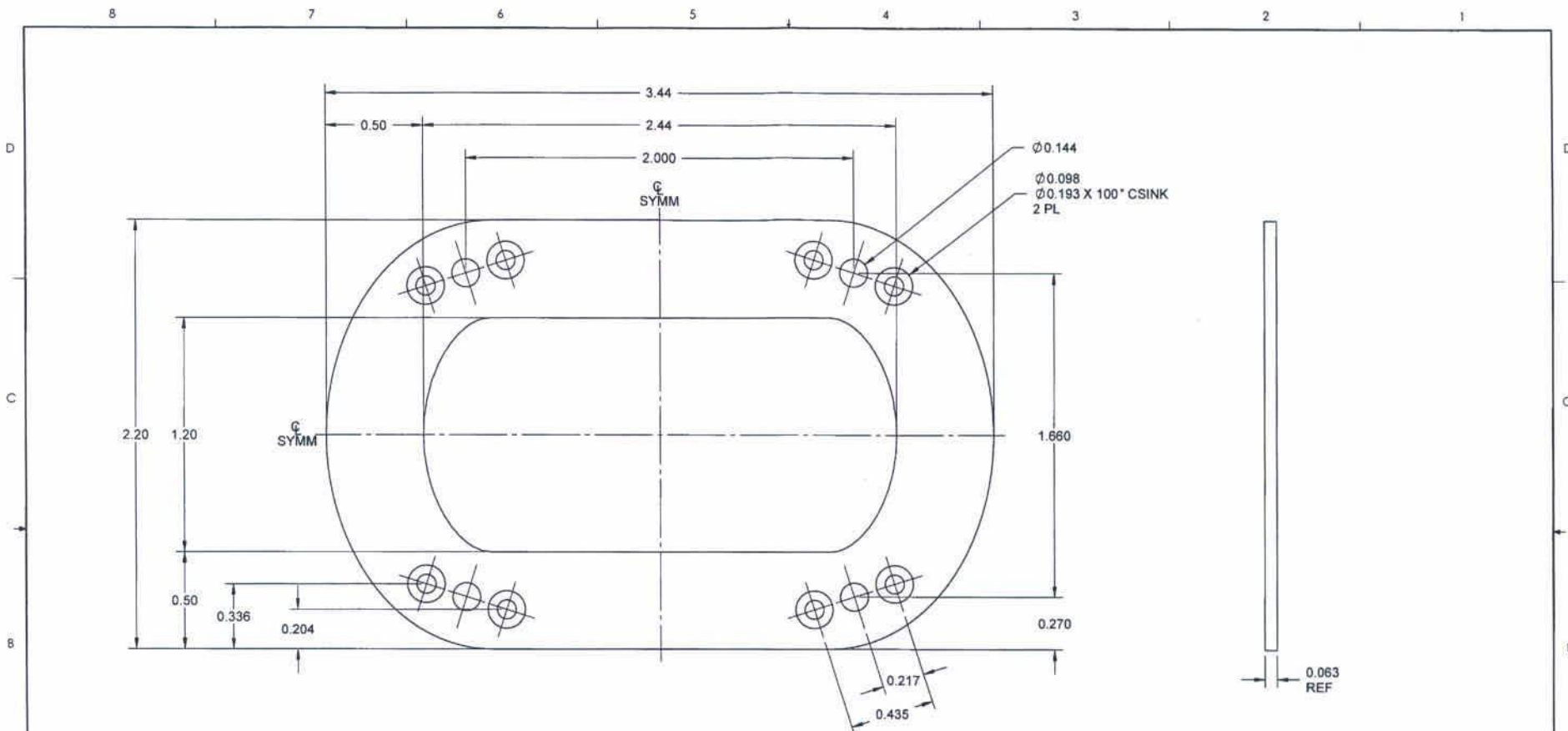
A	NEW ISSUE	MB	10.09.01
REV.	DESCRIPTION	BY	DATE
DESIGN	1		
DRAWN	1		
CHECKED	R		
MFG. APPR.	1		
APPROVED	1		
DE APPR.	1		
DATE	10.09.01		

**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D4175** REV. A  
SHEET 1 OF 2  
TITLE **POD GPS DOUBLER ASSY** SCALE NTS

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**D4175-1 POD GPS DOUBLER**

**NOTES:**

- 1) MATERIAL: 6061-T61/T62 ALUMINUM SHEET, 0.063 THICK PER QQ-A-250/11 OR AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209 REF. DART SPEC. M6061T6S.063
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 POWDER COAT "GREY SANDEXT" (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.02 lbs

DESIGN		<b>DART AEROSPACE LTD</b>	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4175	SHEET 2 OF 2
APPROVED		TITLE	SCALE
DE APPR.		POD GPS DOUBLER ASSY	NTS
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**RELEASED**  
2010-09-29